

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
TENTATIVE**

**ORDER NO. R9-2003-0394  
NPDES PERMIT NO. CA0108944**

**WASTE DISCHARGE REQUIREMENTS FOR THE  
CITY OF ESCONDIDO  
HALE AVENUE RESOURCE RECOVERY FACILITY**

**INTERMITTENT WET WEATHER DISCHARGE  
TO ESCONDIDO CREEK  
SAN DIEGO COUNTY**

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The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On September 9, 1998, this Regional Board adopted Order No. 98-10, NPDES CA0108944, *Waste Discharge Requirements for the City of Escondido Hale Avenue Resource Recovery Facility, Intermittent Wet Weather Discharge to Escondido Creek*. Order No. 98-10 established requirements for the discharge of up to 9.0 million gallons per day (MGD) of tertiary treated wastewater from the City of Escondido's Hale Avenue Resource Recovery Facility (HARRF) to Escondido Creek under certain circumstances.
2. Pursuant to Provision E.3 of Order No. 98-10, the City of Escondido (hereinafter City) was required to submit their Report of Waste Discharge 180 days prior to the September 9, 2003 expiration date. On March 13, 2003, the City submitted an NPDES permit application for the renewal of Order No. 98-10. On August 5, 2003, the application was determined to be complete. Since the discharger has submitted a complete application for renewal of the NPDES permit, Order No. 98-10 is administratively extended until the adoption of tentative Order No. R9-2003-0394 pursuant to Title 40 of the Code of Federal Regulations (CFR), Part 122.41(b) [40 CFR 122.41(b)].
3. On November 10, 1999, this Regional Board adopted Order No. 99-72, NPDES No. CA0107981, *Waste Discharge Requirements for the City of Escondido Hale Avenue Resource Recovery Facility, Discharge to the Pacific Ocean via the San Elijo Ocean Outfall*. Order No. 99-72, which superceded Order No. 94-104, established requirements for the discharge of up to 16.5 MGD of secondary treated wastewater to the Pacific Ocean via the Escondido Land Outfall and the San Elijo Ocean Outfall.
4. On June 13, 1996, this Regional Board issued, *"Cease and Desist Order No. 96-31 for the City of Escondido,"* for discharging secondary effluent to Escondido Creek during periods of sustained or significant rainfall in violation of the Federal

Clean Water Act. Order No. 96-31 required the City either to pursue a strategy to increase the capacity of the San Elijo Ocean Outfall or to seek authorization for discharges of treated wastewater to Escondido Creek. At the request of the City, this Regional Board issued Addendum No. 1 to CDO No. 96-31 on February 5, 2003. Addendum No. 1 to CDO No. 96-31 extended the deadline for the City to complete measures to terminate all unauthorized discharges to Escondido Creek and tributaries thereto from November 11, 2002 to June 16, 2003.

5. The HARRF is located at 1521 Hale Avenue in the City of Escondido, adjacent to Escondido Creek in the northwest 1/4 of Section 29, T12S, R2W, SBBM, which is the southeastern portion of the City of Escondido within the Escondido Hydrologic Subarea (HSA 904.62) of the Escondido Creek Hydrologic Area (HA 904.60) of the Carlsbad Hydrologic Unit (HU 904.00). The facility is upstream of the San Elijo Hydrologic Subarea (HSA 904.61), which contains San Elijo Lagoon.
6. The City provides wastewater collection, treatment, and disposal to areas within its incorporated boundaries. The City owns the HARRF and the land it occupies, and is responsible for operating and maintaining the treatment and disposal facilities. The City also manages the distribution and off-site use of the recycled water produced by the HARRF. Recycled water use is regulated under separate waste discharge requirements.
7. The conceptual process schematic for the HARRF describes the facility as consisting of preliminary treatment (bar screens and grit removal), primary sedimentation, secondary treatment aeration basins, secondary clarifiers, anaerobic digesters, pre-filtration chlorination, tertiary filters, UV disinfection, flow equalization basin, solids handling and dewatering facilities, chemical addition facilities, and odor control processes.
8. The City reported that the San Elijo Ocean Outfall (SEOO) capacity is limited by pressure restrictions on a 4,000-foot, 30-inch diameter section of the outfall (along the nearshore) which has a maximum pressure limit of 22-psi (50 feet). To protect the 30-inch diameter section from rupture, HARRF effluent is directed through a flow control station prior to discharge to the SEOO. The flow control station is equipped with an automatic valve that regulates land outfall flows to insure the design pressure of the nearshore segment is not exceeded. The City has experienced three episodes during the past several years when wastewater flows exceeded the outfall system. The City was forced to discharge secondary effluent to Escondido Creek in January 1993, March 1995, and January 1997.
9. The proposed discharge location to Escondido Creek is located at latitude 33°07'22", and longitude 117°07'26".

10. The terms, conditions, and limitations of this Order have been developed to protect the beneficial uses and water quality of Escondido Creek and all downstream water bodies, including groundwater basins.
11. The "*Water Quality Control Plan, San Diego Basin (9)*" (hereinafter Basin Plan) was adopted by this Regional Board on September 8, 1994 and subsequently approved by the State Water Resources Control Board (State Board) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan designates beneficial uses, narrative and numerical water quality objectives, and prohibitions which are applicable to the discharge regulated under this Order.
12. In order to protect designated beneficial uses, the Basin Plan establishes water quality objectives (for bacteriological, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the inland surface waters, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions. The Basin Plan also contains prohibitions applicable to surface waters subject to tidal influence and for inland surface waters. The applicable prohibitions and discharge provisions of the Basin Plan have been incorporated herein.
13. The Basin Plan establishes the following existing beneficial uses for the Escondido Creek Hydrologic Subarea (HSA's 904.61 and 904.62):
  - a. Municipal and domestic supply
  - b. Agricultural supply
  - c. Water contact recreation
  - d. Non-contact recreation
  - e. Warm fresh water habitat
  - f. Cold fresh water habitat
  - g. Wildlife habitat
14. The Basin Plan identifies the following beneficial uses for San Elijo Lagoon (HSA 904.61) as follows:
  - a. Water contact recreation
  - b. Non-contact recreation
  - c. Preservation of biological habitats of special significance
  - d. Wildlife habitat
  - e. Preservation of rare and endangered species

- f. Estuarine habitat
  - g. Marine habitat
  - h. Migration of aquatic organisms
  - i. Spawning, reproduction, and/or early development
15. The Basin Plan establishes surface and ground water quality objectives for HA 904.60. The following table identifies the most restrictive water quality objectives within HA 904.60 (concentrations not to be exceeded more than 10 percent of the time during any one year period):

Constituent	Surface Water	Ground Water
Total Dissolved Solids	500 mg/L	750 mg/L
Chloride	250 mg/L	300 mg/L
Percent Sodium	60 %	60 %
Sulfate	250 mg/L	300 mg/L
Nitrogen & Phosphorus	*	--
Nitrate	--	10 mg/L
Iron	0.3 mg/L	0.3 mg/L
Manganese	0.05 mg/L	0.05 mg/L
Methylene Blue Active Substances (MBAS)	0.5 mg/L	0.5 mg/L
Boron	0.75 mg/L	0.75 mg/L
Odor	None	None
Turbidity	20 NTU	5 NTU
Color	20 Units	15 Units
Fluoride	1.0 mg/L	1.0 mg/L

Notes: mg/L = milligrams per liter  
NTU = Nephelometric Turbidity Units

\* Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those that stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentration shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, nor 0.025 mg/L in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/L total P. These values are not to be exceeded more than 10 percent of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 shall be used.

16. The Basin Plan contains, in part, objectives for inland surface waters for: color, taste and odors, floating material, suspended material, settleable materials, oil

and grease, sediment, turbidity, hydrogen-ion concentrations and dissolved oxygen, which are applicable to the discharge.

17. The SWRCB adopted the 2002 Clean Water Act section 303(d) list of water quality limited segments at its February 4, 2003 Board Meeting. The list was approved by the United States Environmental Protection Agency (USEPA) Region 9 on July 25, 2003. The San Elijo Lagoon has been listed by this Regional Board as an impaired water body in accordance with Clean Water Act Section 303(d). The entire 330- acre lagoon is listed as impaired due to eutrophication problems associated with point and non-point source nutrient loading. In addition, 150 acres of the lagoon are listed as impaired due to excessive sedimentation. If/when Waste Load Allocations (WLA's) are calculated in accordance with Total Maximum Daily Load (TMDL) procedures, the limits contained in this or subsequent Orders will be modified accordingly.
18. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, "*Statement of Policy with Respect to Maintaining High Quality of Waters in California*" (collectively "antidegradation policies"), as described in the Basin Plan, the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:
  - a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;
  - b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area to which the waters are located;
  - c. Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and
  - d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.
19. The Regional Board has taken into consideration the requirements of the State and Federal "antidegradation" policies (40 CFR 131.12 and State Board Resolution No. 68-16), the water quality objectives contained in the Basin Plan, and the listing of San Elijo Lagoon as an impaired waterbody, in establishing the

requirements contained herein, and has determined that any reduction in water quality as a result of this discharge will not result in any long-term deleterious effect on water quality. In addition, this Order prohibits the City of Escondido from increasing the amount of nutrients in the lagoon by implementing a nutrient reduction program approved by the Regional Board.

20. The discharger has developed pretreatment programs pursuant to Section 307 of the Clean Water Act, Parts 35 and 403 of Title 40, Code of Federal Regulations (40 CFR 35 and 40 CFR), and/or Section 2233, Article 4, Subchapter 9, Chapter 3, Title 23, California Code of Regulations. The discharger's pretreatment program was approved by the U.S. EPA on June 29, 1982. Pretreatment requirements are contained in the City of Escondido's NPDES permit for wastewater discharge through the San Elijo Ocean Outfall.
21. Stormwater discharges from the HARRF are subject to the terms and conditions of Water Quality Order No. 97-03, *"Waste Discharge Requirements (WDR's) for Discharges of Storm Water Associated With Industrial Activities Excluding Construction Activities."*
22. Effluent limitations, industrial pretreatment standards, biosolid use and disposal regulations, and criteria established under Section 208(b), 301, 302, 303(d), 304, 306, 307, 403 and 405 of the Clean Water Act, as amended (33 U.S.C. 1251 et seq.), are applicable to the discharge. Regulations not specified in this Order are contained in the City of Escondido's NPDES permit for wastewater discharge through the San Elijo Ocean Outfall.
23. This Order shall serve as an NPDES permit for the discharge of tertiary treated wastewater from the City of Escondido's HARRF to Escondido Creek and/or its tributaries pursuant to Section 402 of the CWA and amendments thereto.
24. This Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:
  - a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
  - b. Other waste discharges;
  - c. The need to prevent nuisance;
  - d. Past, present, and probable future beneficial uses of the waters under consideration;
  - e. Environmental characteristics of the waters under consideration;
  - f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
  - g. Economic consideration;

- h. The need for developing housing within the Region; and
  - i. The need to develop and use recycled water.
- 25. The issuance of waste discharge requirements for this discharge is exempt from the requirements for preparation of environmental documents under the CEQA (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.
  - 26. On July 22, 1998, the Escondido City Council certified a final environmental impact report in accordance with the California Environmental Quality Act (Public Resources Code Section 21000, et seq.).
  - 27. The Regional Board has considered all water resources related to environmental factors associated with the discharge of treated wastewater from the HARRF to Escondido Creek and/or its tributaries.
  - 28. The Regional Board has notified the City of Escondido and all known interested parties of its intent to issue NPDES permit requirements for the proposed discharge of waste.
  - 29. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of treated wastewater from the HARRF to Escondido Creek and contiguous waters.
  - 30. This Order complies with Section 402(o) of the Federal Clean Water Act, and the implementing regulations of 40 CFR 122.44(l) which prohibit the establishment of effluent limits in a renewed, reissued or modified NPDES permits that are less stringent than the limits established in the previous permit.

**IT IS HEREBY ORDERED**, that the City of Escondido (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and the regulations adopted thereunder, shall comply with the following:

**A. PROHIBITIONS**

- 1. Compliance with the waste discharge prohibitions, as stated in the 1994 Basin Plan (see Attachment No. 1) is a required condition of this Order.
- 2. A discharge of tertiary treated wastewater to Escondido Creek from the HARRF in excess of a 9.0 MGD flowrate at any time is prohibited unless the discharger obtains revised waste discharge requirements authorizing an increased flowrate.

3. Discharges from the HARRF to Escondido Creek are prohibited unless all of the following conditions have been met:
  - a. The discharge to the San Elijo Ocean Outfall from the HARRF and the San Elijo Water Pollution Control Facility exceeds the maximum capacity of the outfall.
  - b. All emergency in-plant storage has been used.
  - c. Stream flows recorded at the County of San Diego's stream gauging station located approximately 100 yards upstream of the HARRF, exceed an average flow of 300 cubic feet per second during the discharge and are not below 100 cubic feet per second at any time during the discharge.
  - d. The mouth of the San Elijo Lagoon is open or the Regional Board Executive Officer approves otherwise.
  - e. The discharge occurs between November 1 and April 30.
4. The discharge of wastes to State Water Quality Protection Areas, as designated by the State Water Resources Control Board, is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.
5. The discharge of waste at points that have not been specifically described in the Report of Waste Discharge and for which valid waste discharge requirements are not in force is prohibited.
6. The discharge of any pollutant that is not subject to an effluent limitation in this permit is prohibited except in the following circumstances:
  - a. The pollutant has been identified in the administrative record for the permit.
  - b. The pollutant has not been identified in the administrative record for the permit, so long as the discharger: (1) has complied with applicable requirements for disclosure of information about its pollutant discharges, operations and sources of wastes; and (2) complies with all applicable requirements for notification of changes in its operations and discharges.
7. The discharge of oil, trash or other solids, municipal waste biosolids or digester supernatant directly to a surface water or in any manner which may permit it to be washed into a surface water is prohibited.
8. The discharge of waste shall not cause surface erosion or scouring of aquatic substrates.

9. Odors, vectors, and other nuisances beyond the boundaries of the HARRF are prohibited.
10. The bypassing of untreated wastes to Escondido Creek and/or its tributaries containing concentrations of pollutants in excess of the effluent limitations of this Order is prohibited.
11. The discharge of any substances in concentrations toxic to human, animal, plant or aquatic life is prohibited.
12. The discharge shall not:
  - a. Cause the presence of coliform or pathogenic organisms in waters pumped from the affected basins;
  - b. Cause the occurrence of objectionable tastes and/or odors in waters pumped from the affected basins;
  - c. Cause waters pumped from the affected basins to foam;
  - d. Cause the present of toxic materials in waters pumped from the affected basins;
  - e. Cause concentrations of chemical constituents in excess of the maximum contaminant level specified in Title 22, Chapter 15, Article 4, Section 64435, Tables 2 and 4 of the California Code of Regulations in waters pumped from the affected basins;
  - f. Cause the pH of waters pumped from the affected basins to fall below 6.0 or rise above 9.0;
  - g. Cause this Regional Board's groundwater objectives for HSA's 904.61, 904.62 and San Elijo Lagoon, as established in the Basin Plan, to be exceeded;
  - h. Cause a nuisance or adversely affect beneficial uses for the surface waters in HSA's 904.61, 904.62 and San Elijo Lagoon, as established in the Basin Plan;
  - i. Cause odors, septicity, mosquitoes, weed growth or other vectors or nuisance conditions in Escondido Creek, its tributaries, or San Elijo Lagoon.

## **B. DISCHARGE SPECIFICATIONS**

1. The discharge of treated wastewater from the HARRF to Escondido Creek or its tributaries containing pollutants in excess of the following effluent limitations is prohibited:

- a. The monthly average percent removal for Carbonaceous Biochemical Oxygen Demand (CBOD, performed at 20°C for 5 days) shall not be less than 85%.
- b. The monthly average percent removal for Total Suspended Solids (TSS) shall not be less than 85%.
- c. Total coliform concentration of the effluent shall not exceed a MPN (most probable number) of 2.2 per 100 mL, based on the median of the results of the last 7 days for which analyses have been completed; and shall not exceed a MPN of 23 per 100 mL in more than one sample in any 30-day period. No samples shall exceed an MPN of 240/100 mL.
- d. Turbidity concentration of the effluent shall not exceed a daily average value of 2 Nephelometric Turbidity Units (NTU), shall not exceed 5 NTU more than 5% of the time during a 24-hour period, and shall not exceed 10 NTU at any time.
- e. Effluent Limitations for Major Constituents and Properties of Wastewater:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> )	mg/L lbs/day	25 1876	40 3002	45 3377
Suspended Solids	mg/L lbs/day	30 2251	45 3377	50 3753
pH	Units	Within the limits of 6.0 and 9.0 at all times		

Notes: mg/L = milligrams per liter  
lbs/day = pounds per day

- f. California Toxics Rule (CTR) Effluent Limitations:

Constituent	Units	Monthly Average	Daily Maximum
Bis (2-Ethylhexyl) Phthalate	µg/L lbs/day	11 0.83	24 1.8
Bromoform	µg/L lbs/day	51 3.8	103 7.7
Chlorodibromomethane	µg/L lbs/day	4.4 0.33	13 0.98
Dichlorobromomethane	µg/L lbs/day	0.56 0.042	1.7 0.13
Gamma-BHC	µg/L lbs/day	0.23 0.017	0.46 0.035

Constituent	Units	Monthly Average	Daily Maximum
Mercury	µg/L lbs/day	0.05 0.0038	0.11 0.0083
Methylene Chloride	µg/L lbs/day	12 0.90	39 2.9
Selenium	µg/L lbs/day	3.8 0.29	8.8 0.66
Tetrachloroethylene	µg/L lbs/day	0.8 0.60	1.6 0.12

Notes: µg/L = micrograms per liter  
lbs/day = pounds per day

g. Effluent Limitations for Basin Plan Constituents:

Constituent	Units	Daily Maximum <sup>1</sup>
Total Dissolved Solids	mg/L lbs/day	1100 82566
Chloride	mg/L lbs/day	300 22518
Sulfate	mg/L lbs/day	325 24394
Nitrogen (Total)	mg/L lbs/day	35 2627
Phosphorus (Total)	mg/L lbs/day	3.0 225
Iron	mg/L lbs/day	0.3 22
Manganese	mg/L lbs/day	0.10 7.5
Methylene Blue Active Substances	mg/L lbs/day	0.5 37
Boron	mg/L lbs/day	1.1 83
Color	Units	20
Fluoride	mg/L lbs/day	1.5 112
Ammonia (NH <sub>4</sub> <sup>+</sup> plus NH <sub>3</sub> )	mg/L lbs/day	25 1877
Phenolic Compounds	µg/L lbs/day	1.0 0.075
Inorganic Chemicals	Not to exceed limits specified in California Code of Regulations, Title 22, Table 64431-A of Section 64431. (Attachment 4)	
EPA Toxic Pollutants	Not to exceed limits specified in 40 CFR 131.36.	

Constituent	Units	Daily Maximum <sup>1</sup>
Organic Chemicals	Not to exceed limits specified in California Code of Regulations, Title 22, Table 64444-A of Section 64444. (Attachment 5)	
Radionuclides	Not to exceed limits specified in California Code of Regulations, Title 22, Table 4 of Section 64443. (Attachment 6)	

1 Not to cause exceedances of water quality objectives

Notes: mg/L = milligrams per liter  
µg/L = micrograms per liter  
lbs/day = pounds per day

2. The Mass Emission Rate (MER) limits in this Order were calculated using a flowrate (Q) = 9.0 MGD and the indicated concentration values. When the discharge flowrate is lower than 9.0 MGD, the MER limits shall be correspondingly lower.
3. Compliance with the daily, weekly and monthly average limits specified in Section B.1.e and the monthly average specified in Section B.1.f shall be determined from the flow-weighted average of all samples taken during the specified periods. Compliance with the instantaneous limits specified in Sections B.1.f and B.1.g shall be determined from the results of grab samples taken during the specified periods.
4. There shall be no visible oil or grease in the discharge.
5. The discharge of treated wastewater from the HARRF to Escondido Creek or its tributaries shall be adequately disinfected, oxidized, coagulated, clarified, filtered wastewater (tertiary treated effluent) or equivalent, pursuant to Title 22, Division 4, Chapter 3, Article 5, Section 60315 of the California Code of Regulations.

The wastewater shall be considered adequately disinfected if in the effluent at some location in the treatment process, the median number of coliform organisms does not exceed 2.2 per 100 mL and the number of coliform organisms does not exceed 23 per 100 mL in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7 days for which analyses have been completed.

Filtered wastewater means an oxidized, coagulated, and clarified wastewater which has been passed through natural undisturbed soils or filter media, such as sand or diatomaceous earth (or equivalent as determined by the State Department of Health Services), so that the

turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 2 turbidity units and does not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period.

6. Wastewater discharged from the HARRF to Escondido Creek must be essentially free of:
  - a. Material that is floatable or will become floatable upon discharge.
  - b. Settleable material or substances that form sediments which degrade benthic communities or other aquatic life.
  - c. Substances which will accumulate to harmful levels in adequate sediments or biota.
  - d. Substances which significantly decrease the natural light to benthic communities and other aquatic life.
  - e. Materials that result in aesthetically undesirable discoloration of surface waters.
7. Waste discharges from the HARRF shall be discharged in such a manner as to provide maximum protection to aquatic environments.
8. The discharge shall not cause pollution, contamination, or nuisance, as those terms are defined in CWC Section 13050, as a result of the treatment or discharge of wastes.
9. The discharge from the HARRF to Escondido Creek shall not result in an increase in nutrient loading to San Elijo Lagoon nor contribute to any increase in biostimulation within the lagoon.

## **C. TOXICITY REQUIREMENTS**

1. Acute Toxicity

The discharge shall not result in acute toxicity in ambient receiving waters. The effluent shall be deemed acutely toxic when:

- a. The toxicity test of 100% effluent results in less than 90 percent survival 50 percent or more of the time, or
- b. The survival rate of the test organisms is less than 50 percent in any single test.

2. Chronic Toxicity

The discharger is required to conduct chronic toxicity monitoring as specified in the Monitoring and Reporting Program No. R9-2003-0394.

3. Toxicity Reduction Requirements and Provisions

- a. If the result of any individual chronic toxicity test of the effluent exceeds 1.0 TU<sub>c</sub>, the discharger shall implement the accelerated monitoring program as per the attached Monitoring and Reporting Program.
- b. If the results of two consecutive chronic toxicity tests of the effluent exceed 1.0 TU<sub>c</sub> the discharger is required to investigate the causes of the toxicity in accordance with an investigation program approved by the Executive Officer of the Regional Board.
- c. If warranted by the results of the investigation program described in Toxicity Requirement C.4, the discharger shall, in a timely manner, take all reasonable steps as agreed upon by the Regional Board's Executive Officer to identify the source(s) of toxicity through a Toxicity Identification Evaluation (TIE) and, if appropriate, a Toxicity Reduction Evaluation (TRE).
- d. Upon notification by the Regional Board's Executive Officer that a TIE/TRE is required, the discharger shall submit the proposed schedule under which these actions will be implemented.

4. TIE/TRE Requirements for Chronic Toxicity

At a minimum, TIE/TRE for chronic toxicity shall be conducted in accordance with the following:

- a. In the absence of EPA approved protocols for conducting TIE/TRE investigations for chronic toxicity, the discharger shall conduct a TIE/TRE investigation using the draft protocols published by the USEPA (Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase 1: EPA-600/6-91/005; June, 1991) and/or protocols approved by the Executive Officer of the Regional Board. Upon adoption of EPA approved protocols, those protocols shall be used for conducting TIE/TRE's.
- b. In the event that the acute effluent limitations continue to be exceeded or chronic toxicity is identified in the effluent one year after the completion of the agreed upon toxicity source identification and reduction measures, the discharger will be required at the discretion of the Regional Board's Executive Officer to conduct additional toxicity investigations to assess the propriety of prior TRE findings, determine whether new sources of toxicity are present,

and whether and what additional toxicity reduction measures are appropriate and reasonable.

- c. In determining whether enforcement of an exceedance of a toxicity limitation is appropriate, among other factors, the actions of the discharger to address the exceedance, source of the pollutants, prior notice, test variability, and ability to identify and rectify the source of the problem will be considered.

#### **D. RECEIVING WATER LIMITATIONS**

The discharge from the HARRF shall not, by itself or jointly with any other discharge, cause violations of the following receiving water quality objectives:

##### **1. Bacteriological Standards**

- a. In waters designed for contact recreation (REC1) the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 mL, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 mL.
- b. In waters designated for noncontact recreation (REC2), and not designated for contact recreation (REC1), the average fecal coliform concentration for any 30-day period, shall not exceed 2,000 per 100 mL nor shall more than 10 percent of samples collected during any 30-day period exceed 4,000 per 100 mL.
- c. In waters designated for contact recreation (REC1) the monthly average *E. coli* concentration shall not exceed 126/100 mL and the maximum concentration shall not exceed 576/100 mL.
- d. In bays and estuaries, the most probable number of coliform organisms in the upper 60 feet of the water column shall be less than 1,000 per 100 mL provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 mL, and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 mL.
- e. At all areas where shellfish may be harvested for human consumption (SHELL), the median total coliform concentration for any 30-day period shall not exceed 70 per 100 ml, nor shall more than 10 percent of the samples collected during any 30-day period exceed 230 per 100 mL for a five-tube decimal dilution test or 330 per 100 mL when a three-tube decimal dilution test is used.

2. Physical Standards

- a. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.
- b. Waters shall not contain oils, greases, waxes or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which adversely affect beneficial uses.
- c. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- d. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.
- e. The discharge of waste shall not cause aesthetically undesirable discoloration of the surface water.
- f. Natural light shall not be significantly reduced as a result of the discharge of treated wastewater.
- g. The rate of deposition of solids and the characteristics of solids in receiving water sediments shall not be changed such that benthic communities are degraded.
- h. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

3. Chemical Standards

- a. Dissolved oxygen levels shall not be less than 5.0 mg/L in inland surface waters with designated WARM beneficial uses or less than 6.0 mg/L in waters designated as COLD beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7.0 mg/L more than 10 percent of the time.
- b. Changes in normal ambient pH levels shall not exceed 0.5 units in fresh waters with designated warm freshwater habitat (WARM) beneficial uses. In bays and estuaries the pH shall not be depressed below 7.0 nor raised above 9.0. In inland surface waters the pH shall not be depressed below 6.5 nor raised above 8.5.
- c. The dissolved sulfide concentration of waters in and near sediments and throughout the water column shall not be significantly increased above that present under natural conditions.
- d. The concentration of organic materials in receiving water sediments shall not be increased to levels that would degrade aquatic life.

- e. Concentrations of nitrogen and phosphorous, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth and shall not degrade indigenous biota.
- 4. Biological Standards
  - a. Inland surface water communities and populations, including vertebrate, invertebrate, and plant species, shall not be degraded.
  - b. Waters shall not contain taste or odor producing substances at concentrations that cause a nuisance or adversely affect beneficial uses. The natural taste, odor, and color of fish, shellfish, or other inland surface water resources used for human consumption shall not be impaired.
  - c. The concentration of organic materials in fish, shellfish or other aquatic resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.
  - d. The concentration of contaminants in waters which are existing or potential sources of drinking water shall not occur at levels that are harmful to human health.
- 5. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Board.
- 6. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.
- 7. The discharge shall not cause the dissolved oxygen concentration of Escondido Creek or contiguous waters to be depressed below 5.0 mg/L. If the ambient dissolved oxygen concentration is less than 5.0 mg/L, the discharge shall not cause a further depression.
- 8. The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alterations in temperature does not adversely affect beneficial uses.

## **E. PROVISIONS**

1. The discharge shall comply with the attached Monitoring and Reporting Program No. R9-2003-0394.
2. The discharger must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the CWA and the California Water Code, and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of an application for permit renewal, modification, or reissuance.
3. The discharger must comply with all standard provisions, where applicable, as stated in 40 CFR 122 (see Attachment No. 2) and Additional Standard Provisions (see Attachment No. 3), which are incorporated into this permit by reference.
4. The discharger shall submit reports and provide notifications to the Regional Board and other agencies as specified in this Order. Reports and notifications submitted to the Regional Board shall be made to:

California Regional Water Quality Control Board  
San Diego Region  
POTW Compliance Unit  
9174 Sky Park Court, Suite 100  
San Diego, California 92123-4340  
Telephone: (858) 467-2952  
Fax: (858) 571-6972

5. Appropriate Treatment Plant Operations and Maintenance (O&M) manual(s) shall be posted at a prominent location at the permitted treatment or disposal facility, and shall be available to operating and/or on-site personnel at all times. The O&M manual(s) shall be prepared, revised, and/or updated by qualified engineers to account for any changes in plant operations or processes. The O&M manual(s) shall be reviewed by the discharger at least once every three years. The discharger shall certify, in writing, to this RWQCB that appropriate, updated, and accurate O&M manual(s) are utilized at the treatment or disposal facility, or that modifications to the manual(s) are required, the details of the revisions necessary, and the date and method of completion.
6. Supervisors and operators of the discharger's wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with Chapter 14 of Division 4 of Title 23 of the California Code of Regulations. All operating personnel will be of appropriate grade to perform the operations and/or maintenance they are assigned to. The Annual Report will include the grade certifications of all operating

personnel and summaries of any training received in the previous calendar year.

7. All waste treatment, containment and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.
8. All waste treatment, containment and disposal facilities shall be protected against erosion, overland runoff and other impacts resulting from a 100-year frequency 24-hour storm.
9. This Order expires on December 10, 2008, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit provided that all requirements of the federal NPDES regulations on the continuation of expired permits are complied with. [40CFR 122.6, 23 CCR 2235.4].
10. Order No. 98-10 is rescinded when this Order becomes effective.

I, John H. Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on

TENTATIVE  
JOHN H. ROBERTUS  
Executive Officer